<u>REMARKS</u>

Claims 1-2, 4-9, 11-24, and 26-29 remain in the application. Claims 3, 10, and 25 have been canceled, without prejudice or disclaimer, and claims 1, 4, 8, 11, 15-19, 21-23, and 26 have been amended hereby.

The claims have been carefully reviewed and amended with particular attention to the points raised in the Office Action. It is submitted that no new matter has been added and no new issues have been raised by the present amendment.

Reconsideration is respectfully requested of the rejection of claims 16-17 and 19-22 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The instances noted in the Office Action have been addressed by the amendments made to the claims hereby.

Withdrawal of the rejection of claims 16-17 and 19-22 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Reconsideration is respectfully requested of the rejection of claims 1-14 and 23-29 under 35 U.S.C. § 103(a), as allegedly being anticipated by U.S. Patent No. 6,772,331 (Hind et al.) in view of U.S. Patent No. 5,805,834 (McKinley et al.).

Applicants have carefully considered the comments of the Office Action and the cited references, and respectfully submit that amended claims 1-14 and 23-29 are patentably distinct over the cited references for at least the following reasons.

The present invention relates to a communication device, communication method, and communication terminal device for use in a wireless local area network (LAN) system. The LAN system may employ a Bluetooth system for radio frequency (RF) networking between a plurality of personal computers and devices. The communication device includes a network setting storage section for storing network setting information used by a radio communication central processing unit (CPU) in controlling connections with a communication network.

Hind et al., as understood by Applicants, relates to a method and system for enabling wireless devices to be paired or permanently associated by a user or a network administrator. The method and system utilize public key cryptography and machine unique identifiers to establish a secure channel and associate the devices with each other. This allows a wireless headset to be associated with a telephone or association of a wireless mouse with a computer.

McKinley et al., as understood by Applicants, relates to a hot-reconfigurable parallel bus bridging circuit provided in a computer system. The circuit enables the computer system to communicate via a peripheral port with any one of plurality of incompatible standardized parallel bus systems. The hot-reconfigurability of the bridging circuit is accomplished using software to reconfigure or reprogram the various combinational logic gates, wait-state generators, and registers of the bridging circuit while the computer system is operating without removing the bridging circuit from the computer system. The flexible hardware architecture allows the computer system that houses the hardware to communicate

with virtually any type of parallel bus system.

It is respectfully submitted that the cited references do not disclose or suggest communication carried out between the communication device and the public communication network, and the storage of two layers of protocols in the communication device, as recited in the amended claims.

In the present invention, a wireless LAN is connected to a public communication network, and a Bluetooth system may be employed to perform data communication among communication equipment (see Fig. 1, elements 2a-2e), the radio communication device (Fig. 1, element 3), and host equipment (Fig. 1, element 4) upon which the radio communication device is mounted.

The radio communication device includes an individual information storage section storing the individual information and network information. This allows a connection with an Internet service provider to be made by starting point to point (PPP) protocol on the radio communication CPU and using the individual information and network setting information.

A connection between the host equipment and an Internet server can be made by starting the Internet protocol (IP) and transport control protocol (TCP), then transmitting and receiving encapsulated user data to and from the Internet server using the individual information and the network setting information, and connecting to the host equipment using the control packet.

Therefore, using the radio communication device, it is not necessary to store the individual information and network setting information in the host equipment. This allows the

connection setting between each piece of host equipment and the Internet server to be carried out by loading the radio communication device in each piece of host equipment. It is the radio communication device that carries out transmission and reception of data between the host equipment and the public communication network, thereby allowing the individual information and network setting information to be shared by the respective pieces of host equipment by performing single-element management of the address information of the server on the public communication network and the transmission/reception record, irrespective of the type of each piece of host equipment.

That is, in the present invention, after setup of the connection IP and TCP data, transmission is performed between the communication device and the public communication network, but not between the host device and the public communication network.

As understood by Applicants, in the system of Hind et al., TCP/IP data transmission is carried out between the host device and the public communication network.

Furthermore, in the present invention upper and lower protocol layers are stored in the communication device. The lower layer includes protocols for communication over a short-distance radio communication network, and the upper layer includes at least one of PPP, IP, and TCP protocols for communication with an external communication network (see Fig. 2).

As understood by Applicants, however, McKinley et al. does not disclose or suggest storage of the protocols of the

upper layer.

It is respectfully submitted that neither Hind et al. nor McKinley et al., alone or in combination, disclose or suggest a communication device comprising wired communication means for providing/receiving data via physical connection means to/from a mounted host equipment, short distance radio communication means for transmitting/receiving data to/from an external communication network via a short distance radio communication network, storage means in which communication setting information as information related to the communication network, and at least protocols of an upper protocol layer and protocols of a lower protocol layer are stored, and communication control means for setting a connection relation with the communication network via the short distance radio communication network using the protocols of the lower protocol layer based upon the communication setting information stored in the storage means, and controlling transmission/reception of data between the communication network and the host equipment using at least one protocol of the upper protocol layer, wherein the lower protocol layer includes protocols for communication in the short distance radio communication network, and the upper protocol layer includes at least one protocol of PPP, IP, and TCP for communication with the external communication network, as recited in amended independent claim 1.

Accordingly, for at least the above-stated reasons, it is respectfully submitted that amended independent claim 1, and the claims depending therefrom, are patentable over the cited references. Amended independent claims 8 and 23, and the

claims depending therefrom, are believed to be patentable over the cited references for at least similar reasons.

Withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

Reconsideration is respectfully requested of the rejection of claims 15-22 under 35 U.S.C. § 103(a), as allegedly being unpatentable over Hind et al. in view of McKinley et al. and further in view of U.S. Patent No. 5,764,899 (Eggleston et al.).

Applicants have carefully considered the comments of the Office Action and the cited references, and respectfully submit that amended claims 15-22 are patentably distinct over the cited references for at least the following reasons.

The Office Action notes that neither Hind et al. nor McKinley et al. disclose or suggest wired communication means, short distance radio communication means, and communication means being housed in a single casing (see Office Action, p. 8, lns. 13-18). Eggleston et al. is cited as allegedly disclosing the missing element.

It is respectfully submitted that, for at least the reasons set forth above, neither Hind et al. nor McKinley et al. disclose or suggest communication carried out between the communication device and the public communication network, and the storage of two layers of protocols in the communication device, as recited in the amended claims.

Eggleston et al., as understood by Applicants, relates to a method and apparatus for communicating an optimized reply, wherein when sending a reply (902) in a first embodiment a remote communication unit's controller (206) generates a delta

-21-

between a preceding message and the reply message, and forms
an optimized reply (904) using the delta and an identifier of
the preceding message. On receiving the optimized reply, the
communication server uses the data unit identifier to retrieve
(910) the preceding message from a further server (e.g., the
post office mailbox of the user associated with the remote
unit), reconstructs (914) the full reply from the retrieved
message and the delta, and forwards (916) the full reply to
the addressee. When receiving a reply for the remote unit
(918), an index is preferably maintained by both units of mail
stored at the remote unit. From this index a preceding message
forming part of the reply is identified (920). An optimized
reply is then similarly formed (922) and sent to the remote
unit.

As understood by Applicants, however, Eggleston et al.
does not teach the storage of protocols of an upper protocol
layer and a lower protocol in the communication device, the
lower layer including protocols for short-distance radio
communication and the upper layer including at least one
protocol of PPP, IP, and TCP for communication with an
external network.

Therefore, it is respectfully submitted that neither Hind
et al., McKinley et al., nor Eggleston et al., alone or in
combination, disclose or suggest a communication device
comprising wired communication means for providing/receiving
data via physical contact means to/from a mounted host
equipment, short distance radio communication means for
providing/receiving data to/from an external communication
network via a short distance radio communication network,

storage means in which communication setting information as information related to the communication network and at least protocols of an upper protocol layer and protocols of a lower protocol layer are stored, and communication control means for setting a connection relation with the communication network via the short distance radio communication network using protocols of the lower protocol layer based upon the communication setting information stored in the storage means.

Furthermore, the combined references do not suggest controlling transmission/reception of data between the communication network and the host equipment using at least one protocol of the upper protocol layer, wherein the wired communication means, the short distance radio communication means, the storage means, and the communication control means are housed in a single casing, the wired communication means is arranged on one side of the communication control means, and the short distance radio communication means is arranged on the other side of the communication control means the lower protocol layer includes protocols for communication in the short distance radio communication network, and the upper protocol layer includes at least one protocol of PPP, IP, and TCP for communication with the external communication network, as described above and as recited in amended independent claim 15.

Accordingly, for at least the above-stated reasons, it is respectfully submitted that amended independent claim 15, and the claims depending therefrom, are patentable over the cited references. Amended independent claims 18 and 23, and the claims depending therefrom, are believed to be patentable over

the cited references for at least similar reasons.

Furthermore, it is respectfully submitted that there is no motivation within the cited references to combine the elements in the manner suggested in the Office Action.

Withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

Should the Examiner disagree, it is respectfully requested that the Examiner specify where in the cited document there is a basis for such disagreement.

The references made of record have been reviewed but are not seen to disclose or suggest the present invention as recited in the amended claims.

The Office is hereby authorized to charge any fees which may be required in connection with this amendment and to credit any overpayment to Deposit Account No. 03-3125.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,
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